Cayin

N6

Portable Lossless Music Player

User Manual

N6 Quick Guide and User Manual can be downloaded from Cayin website: http://en.cayin.cn/

N6
Portable
Lossless Music
PLAYER
Salute to Hi-Fi Burn your music

Thank you for purchasing Cayin N6, our lossless Digital Audio Player (DAP). We have prepared this user manual with FAQ to help you understand the features and get familiar with the operation of the DAP.

We suggest all customers read through this manual before they start to use the DAP.

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Disclaimer

All rights reserved.
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The user manual is a documentation of the product based on the specification at the time of print. Cayin reserved the right to change product specification without prior notice.

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Handling and Disposal of Electronic Waste

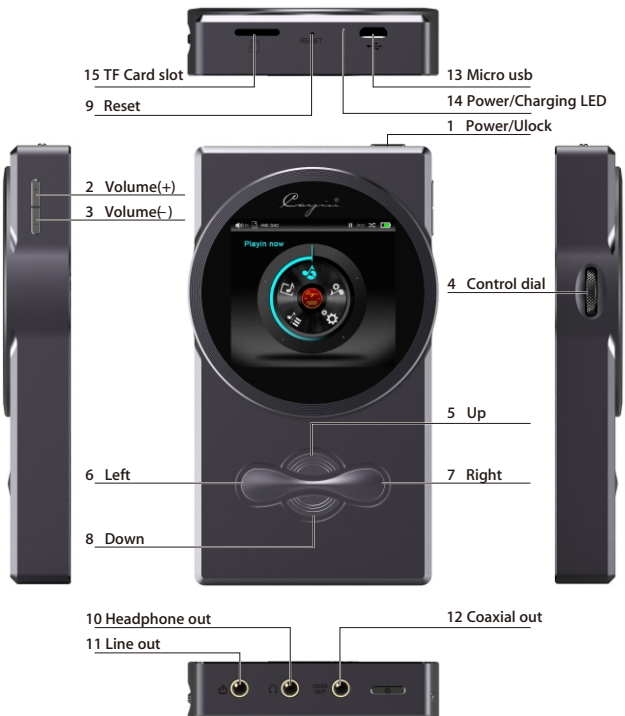
- This product contains electrical and electronic components, please do not dispose the product as of general household waste.
- This product should be handled by Trash and Recycling Collection Center as organized by your local government.
- This product uses lithium battery. Please dispose Lithium battery according to relate lawful procedure from your local government.
- For detail instruction, please refer to the Environmental protection and/or Disposal Control department in your local government.

Symbolic Instructions

- Notification Icon: ※
  Will inform important issues that require special attention during operation
- Alert Icon: ★
  Will alert critical issues and/or sever danger that might result in serious damage during operation if fail to operate according to the warning

Introducing N6

Main control components



Control Functions

1 **Power /Unlock:** Turn on or off Player when pressed for 2 second, will light up screen or turn off screen (Lockup) when clicked
2 **Volume (+):** Increase volume when pressed
3 **Volume (-):** Decrease volume when pressed
4 **Control Dial**
- At Menu screen: roll up or down to go through menu item, click to confirm a menu item, or play a song in a folder
- At "Playing Now" screen: roll up or down to activate title list in folder view, click to display hidden menu at top status bar, or confirm a menu item.

5 **Up**
- At Menu screen: Click to move up one menu item, hold to scroll through menu selections quickly
- At "Playing Now" screen: Click to select previous track, or beginning of current track.
- The player will start "Rewind" searching when hold on the Up button, and will start to play at selected time location when released.

6 **Left:** Move backward to one previous menu level, or go to "Playing Now" screen
7 **Right**
- At Menu screen, Enter to confirm OK or move into next menu level
- At "Playing Now" screen: Play or Pause

8 **Next**
- At Menu screen, click to move down one menu item, hold to scroll through menu selection quickly
- At "Playing Now" screen: Click to select Next track,
- The player will start Fast Forward (FF) searching when hold on the Up button, and will start to play at selected time location when released.

9 **Reset:** If the Player fails to operate or freeze unexpectedly, you can reset the player by inserting a non-metal pin (e.g., toothpick) into the small hole at the bottom of the player, you can feel the click contact and the player will restart and resume to normal operation.

※ When the player is in lock screen mode, selected buttons can offer the following function.
Volume (+): Increase volume when pressed, skip to Previous track when hold
Volume (-): Decrease volume when pressed, skip to Next track when hold
Control Dial: Click to pause or resume playback

Output Interface Description

10 **Line Out :** the analog audio signal is output for external amplification devices ; output level will bypass volume control of the player
11 **Headphone Out:** output audio signal to headphone with impedance ranged from 8ohm to 600ohm
12 **Coaxial Out:** output digital audio signal to outboard decoder devices

Prepare to Use

Please read through the following to gain basic understanding before you start to use the player

Package Content

The N6 product package contain the following accessories, please check against the list when you open the package. We suggest you contact your retailer if anything is absent.
1. N6 Digital Audio Player
2. USB cable
3. Coaxial cable (3.5mm to RCA)
4. Silicone Case
5. User Manual
6. Warranty Card

Power On/Off

Turn On: when the player is currently powered off, press and hold (1) Power On/Off button to turn on the player
Turn Off: When the player is currently powered on, press and hold (1) Power On/Off button to turn off the player

Charging

Charge Up the Battery
1. The player will start to charge up the battery when you connect the player to a USB charger or the USB port of a computer via a micro to standard USB cable (as supplied).
2. The battery installed in the player is rated at 5600 mAH (3.7V), it will take around 4 hours to completely charge up the battery by a 2.0A USB charger.

★ N6 does not come with a charger, we recommend our customer to use high quality charger with N6 because inferior charger might introduced high risk in the long run.
Please charge up the battery at room temperature. Charging at very high or low temperature might cause battery failure during the charging process.
Charging while playing: when N6 is connected to a USB charger, it can play music while charging is in progress. If N6 is connected to an USB port of a computer and charging, the player will stop playing music.

Charging recommendations:
Good usage habits can extend battery and player product life. If the player has been partially charged several times, we recommend you to perform a full recharge of the battery.

※ Due to the special characteristic of lithium battery, the battery reading might not be accurate if the player has not been fully discharged for a long time.

Using TF (MicroSD) card

Insert TF card

Insert TF card into the TF slot according to the direction printed on the player, push in until the card locked into the slot securely.

Unplug TF card

Push the TF card into the TF card slot with your fingernail, release your finger, the TF card will release from the slot automatically, you can now pull the TF card out horizontally.

Using Headphones

The Player can use headphones with 3.5mm stereo connectors, please insert the headphone into the Headphone Out port (12) as shown in diagram.
If the headphone is disconnected in the middle of playback, the player will stop automatically.
If you need to use headphone with 6.3mm connectors, please use a high quality adapter (not provided in N6 package) for that purpose.

Adjusting volume

Press (2) Volume (+) or (3) Volume (-) key to adjust the headphone volume to desired level.
Press Volume (+) to increase volume, press Volume (-) to decrease volume.

Gain settings

Please adjust the gain setting of the player according to the need and type of headphone used.
When set the gain setting to "Hdb", the player will operate in high gain setting, this setting is recommend for low sensitivity or high impedance headphone.
When set the gain setting to "Ldb", the player will operate in low gain setting, this setting is recommend for high sensitivity or low impedance headphone.

※ N6 has a high power headphone amplifier, please handle with care.
To avoid hearing damaging caused by loud volume, we recommend you to turn down the volume before you connect a headphone with N6, and gradually increase the volume to desired level.

Transfer files

The Player is equipped with USB 2.0 connection port that support high speed file transfer.
1. Turn on your computer (Mac or PC) and the N6 player
2. Connect the player to the computer by the USB cable supplied in the N6 package
3. The computer will detect the player and pop up file directory windows for the N6 internal storage and the TF card installed in the player, you can copy files to these storage devices while the player is connected to the computer.

Disconnect

1. When the file transfer is completed, disconnect the N6 player from the computer by click and unselect the USB device icon
2. Unplug the USB cable.

Playing music

Playback controls

Play music : At "Playing Now" screen, press "Play / Pause" button as illustrated to start playing music.

Pause : At "Playing Now" Screen, when music is playing, press "Play / Pause" button as illustrated to stop the player, and press "Play / Pause" button again to resume.

Previous/Next track: At "Playing Now" screen, in regardless the player is paused or playing music, click "Previous" button or "Next" as illustrated, the player will jump to either Previous or Next track.

Fast forward , rewind : At "Playing Now" screen, in regardless the player is paused or playing music, hold "Previous" button or "Next" as illustrated, the player will fast forward or rewind to a new time stamp of the track.

Browse and Play

You can access, manage and play the music files stored in the player from the "Music Library" and " Music Category " menu.

Playback from "Music Library"

At the Home menu, select "Music Library", and then select either "Local" or "TF Card" by using the "Right" button on the faceplate of the player, the screen will open up the folder inside the captioned storage and you can browse through the folders and subfolders.

1. Browse and Play

Once entered a folder, your can browse the content with the "Up" and "Down" button to scroll through the subfolders or documents. If you press "Right" at a subfolder icon, the player will lead you into the subfolder and you can continue to browse through the content. If you press "Right" at a document, the player will jump to "Playing Now" screen and start playing the file you selected. All the files stored in this folder will be added to the "Playing Now" list and you can scroll through the list with "Up" and "Down" button to select the file that you want to play, but the files under subfolders of the current folder will not be added to the list.

2. Return to the previous directory

While you are browsing, you can return to previous directory by pressing the "Left" button. If you press the "Left" button repeatedly, the player will bring you back to the previous stage of the menu until you reach the Home screen.

3.Entre a folder

You can enter a folder by using the "Right" button after you selected a folder in the storage directory.

When you press the "Right" button after you selected a document, the player will jump to "Playing Now" screen and start playing the file you selected. All the files stored in this folder will be added to the "Playing Now" list.

4. Add all files into "Playing Now" list

After you enter the "Music Library" menu, you can select "Update the Music Library" option, the system will add all the file stored in "Local" and "TF Cards" to "Playing Now" list, previous "Playing Now" list will be refreshed as a result of this..

You can review the new "Playing Now" list under the "All Songs" option of "Music Category"

※ The Player will stop current playback while updating "Music Library"

※ The system will only display music files that can be processed by the player, all other documents will not be included in the filing system.

Playback from "Music Category"

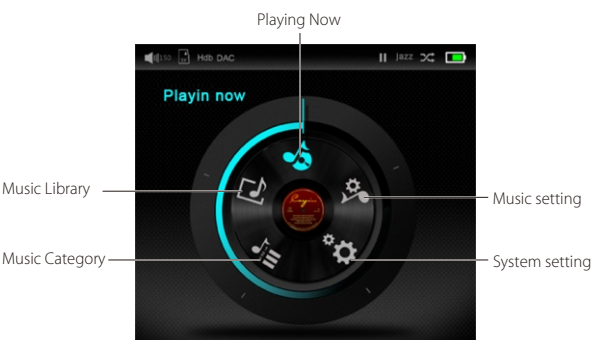
At the Home menu, select "Music Category", the player will offer a list of music grouping or selection criteria at your discretion. Selection the desired grouping by using the "Right" button on the faceplate of the player, the screen will open up the list with all the file organized accordingly, and you can browse through the list with "Up" and "Down" button or play the files with the "Right" button.

For more detail, please refer to detail description of "Music Category" menu.

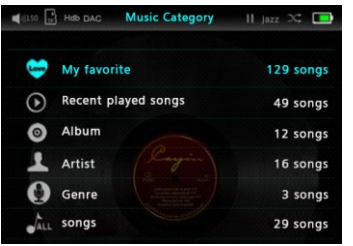
Display and Menu

The Home Screen

The control system of N6 is divided into 5 menu: Music Category, Music Library, Playing Now, Music setting and system setting



Music Category Menu



You can review and playback your music collection according to the predefined criteria at the "Music Category" menu.

My Favorites

When you run into a song that you like, you can mark the song as "My Favorite" and N6 will gather all the marked music files as a special music group.
You can mark or unmark a song as "My Favorite"
You can review and playback the marked files under "My Favorite" option of Music Category menu. The system will also display the total number of files being marked as "My Favorite" in this menu.
Press "Right" button to go into the "My Favorite" list.
Press "Right" button again to play any file in the list.

※ When you remove a file from "My Favorite" list, the system will merely unmark the file from the list, the file will remain in the storage of the Player.

- Add a file to "My Favorites" list

You can add a file to "My Favorites" list by the following steps.
1. From "Music Library": Select the desired file from "Music Library", Press and hold the Control Dial to activate the PoP-up Quick Menu, select My Favorite icon and click the Control dial again to add the file to "My Favorites" list.
2. From "Playing Now": When N6 is playing, go to "Playing Now" menu, press and hold the Control Dial to activate the PoP-up Quick Menu, select My Favorite icon and click the Control dial again to add the file to "My Favorites" list.

- Remove a file from "My Favourite" list

You can remove a file to "My Favorites" list by the following steps.
1. From "My Favorite" list: Go into "Music Category" menu and select "My Favorites" list, select the file that you want to remove , press and hold the Control Dial to activate the PoP-up Quick Menu, select My Favorite icon and click the Control dial again to remove the file from "My Favorites" list.

2. From "Music Library": When you browse through the files in the Music Library menu, all the files that has been marked as "My Favorites" will have a heart icon to identify it for the user. Scroll to the file that you want to remove from "My Favorites", press and hold the Control Dial to activate the PoP-up Quick Menu, select "Remove My Favorite" icon and click the Control dial again to remove the file from "My Favorites" list.
3. From other File list: You can practically unmark a file from "My Favorites" at any file list inside N6. Simply select the file that you want to remove, press and hold the Control Dial to activate the PoP-up Quick Menu, select My Favorite icon and click the Control dial again to remove the file from "My Favorites" list.

Recently Played
You can review "Recently Played" list from "Music Category" menu.
You can check out the total number of files in "Recently Played" list at "Music Category" menu
Press "Right" button to go into the "Recently Played" list.
Press "Right" button again to play any file in the list.

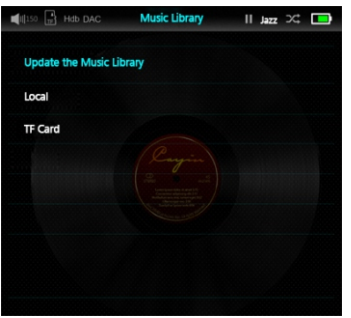
Album
You can review "Album" list from "Music Category" menu.
You can check out the total number of files in "Album" list at "Music Category" menu
Press "Right" button to go into the "Album" list sorted by Album title.
Press "Right" button again to review the file list of the selected Album
Press "Right" button again to play any file in the list.

Artist
You can review "Artist" list from "Music Category" menu.
You can check out the total number of artists in "Album" list at "Music Category" menu
Press "Right" button to go into the "Artist" list sorted by Artist name.
Press "Right" button again to review the file list of the selected Artist
Press "Right" button again to play any file in the list.

Genre
You can review "Genre" list from "Music Category" menu.
You can check out the total number of genre types in "Genre" list at "Music Category" menu
Press "Right" button to go into the "Genre" list sorted by Genre type.
Press "Right" button again to review the file list of the selected Genre type
Press "Right" button again to play any file in the list.

All Songs
The player will generate a comprehensive list that include all the recognizable music file, the "All Songs" list when you perform Update Music Library.,
You can review "All Songs" list from "Music Category" menu.
Press "Right" button to go into the "All Song" list
Press "Right" button again to play any file in the list.

Music Library Menu



You can update the library, review and play any file in the N6 player, be it stored at the internal storage (Local) or the TF card.

Update the music library

You can update the music library at "Music Library" menu
You are advised to update the music library when the content of the Local or TF card has been changed.

Local

You can review and play the music files in "Local" storage at "Music Library" menu

TF card

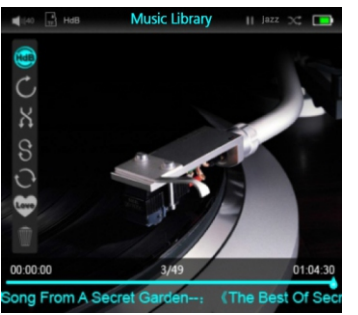
You can review and play the music files in "TF Card" storage at "Music Library" menu

Playing Now Menu

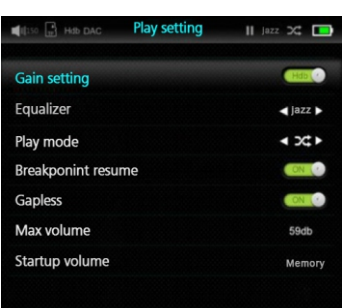
※ When you turn the Control Dial at "Playing Now" menu, the player will display the current play list, you can review or play any file in the list by click at the control dial after you

Playing Now menu will display the following information for your reference:

1.Playback mode
2.Battery capacity
3.EQ setting
4.Timestamp of current file
5.Duration of current file
6.Volume setting
7.Current track number out of total tracks in play list
8.Gain setting



Music settings Menu



You can adjust various music playback control parameters at Music Setting Menu

Gain Setting

After you enter "Music Setting" Menu, select "Gain Setting" to change the setting.
The available options are : HdB/LdB
HdB represents High Gain, LdB represent Low Gain
Factory default setting is LdB

DSD Gain Compensation

After you enter "Music Setting" Menu, select "DSD Gain Compensation" to change the setting.
The available options are : 0dB/+1dB/+2dB/+3dB/+4dB/+5dB/+6dB
Factory default setting is +6dB

Equalizer

After you enter "Music Setting" Menu, select "Equalizer" to change the setting.
The available options are : OFF/Rock/Classic/Jazz/Pop/Dance/Vocal/Blue/Heavy Metal/Custom
Factory default setting is OFF

Play Mode

After you enter "Music Setting" Menu, select "Play Mode" to change the setting.
This setting will instruct the player to loop back at a certain pattern while playing

- **Play Once:** Play all files in the "Playing Now" list and stop at the last file.
- **Shuffle:** Randomly play any files in the "Playing Now" list
- **Repeat Current:** Play the current file repeatedly
- **Repeat All:** Play all files in the "Playing Now" list and loop back to the first file after playing the last file.

Factory default setting is Play Once

Breakpoint Resume

After you enter "Music Setting" Menu, select "Breakpoint Resume" to change the setting.
The available options are : ON/OFF
Factory default setting is OFF
Once activated, N6 will remember the file that was playing when you turn off the player, and resume to the beginning of the file when you turn on the player again.

Gapless

After you enter "Music Setting" Menu, select "Gapless" to change the setting.
The available options are : ON/OFF
Factory default setting is OFF
Once activated, the player will facilitate gapless playback according to the sequence in "Playing Now" list

Max volume

After you enter "Music Setting" Menu, select "Max volume" to change the setting.
The available range are : 0~100
Factory default setting is 100
You can adjust the volume setting by turning the control dial.

Startup volume

After you enter "Music Setting" Menu, select "Startup volume" to change the setting.
The available option are : Medmory/Custom
Factory default setting is Memory

Setup startup volume
After you enter "Music Setting" Menu, select "Setup startup volume" to change the setting.
The available range are : 0~100
Factory default setting is 20
You can only adjust the startup volume setting after you changed the Startup Volume to Custom.

Balance
After you enter "Music Setting" Menu, select "Balance" to change the setting.
The available range are : L10~0~R10
Factory default setting is 0
We do not recommend user to change the balance setting unless you are in an extenuating circumstances

Album Art
After you enter "Music Setting" Menu, select "Album Art" to change the setting.
The available options are : ON/OFF
Factory default setting is ON

Lyric
After you enter "Music Setting" Menu, select "Lyric" to change the setting.
The available options are : ON/OFF
Factory default setting is ON

System Settings Menu

You can adjust various system control parameters at System Setting Menu

Language

After you enter "System Setting" Menu, select "Language" to change the setting.
The available options are : Simplified Chinese/Traditional Chinese/English
Factory default setting is Simplified Chinese
The player will always pop up the Language setting menu after a firmware upgrade, please select your appropriate choice of language before you proceed.

USB Mode

After you enter "System Setting" Menu, select "USB Mode" to change the setting.
The available options are : USB/DAC
Factory default setting is USB
The player will perform as an USB storage or USB DAC when connected to a computer.

Backlight Time

After you enter "System Setting" Menu, select "Backlight Time" to change the setting.
The available options are : 30s/1m/5m/10m/30m/* (always)
Factory default setting is 30s

Brightness

After you enter "System Setting" Menu, select "Brightness" to change the setting.
The available options are : 1/2/3/4/5 (brightest)
Factory default setting is 2
A brighter screen will draw more power. When you turn up the brightness of the player, the battery life will be shortened.

Scheduled Power Off

After you enter "System Setting" Menu, select "Scheduled Power Off" to change the setting.
The available options are : ON/OFF
Factory default setting is OFF
Tips: Once you turn on "Scheduled Power Off", the player will turn off the machine at designated time in regardless whether the player is in idle or in the middle of playback or operation of any kind.

Scheduled Power Off time

After you enter "System Setting" Menu, select "Scheduled Power Off time" to change the setting.
The available options are : 5m/10m/20m/30m/60m/120m
Factory default setting is 10m
Tips: You can only adjust this time setting after you changed the "Scheduled Power Off" to On

Reset

After you enter "System Setting" Menu, select "Reset" to change all settings back to factory default.
Click at "Right" button, the player will pop out a Yes/No selection menu, please select your choice of action and determine if you want to reset the player to factory default condition.

About the Player

After you enter "System Setting" Menu, select "About the Player" to review the Player information
Click at "Right" button, the system will flip into an information page to display the hardware, storage and firmware information of the player. Scroll down with "Down" button and you can review the Quick User Guide of N6

Firmware upgrade

For the hardware to function properly, Cayin has developed the N6 firmware to become the foundation of the system functions. Cayin will issue updated N6 firmware from time to time to improve the efficiency and performance of the hardware platform. We also want to improve and optimize the features and functions of the player through subsequent firmware updates.

※ 1. Each version of firmware might contain minor different, consumer please decide on your own accord whether you need to update the firmware of your N6 Player.
2. Under normal circumstances, firmware upgrade will not cause any damage to user information, but Cayin cannot exclude the possibility of upgrade failure due to mal-operation or any other reason. For these reasons, you might be required to format your N6 player and result in losing person data stored on the player. We strongly suggest you backup all your personal data stored on the player before you perform firmware upgrade.
3. The N6 firmware cannot be used in other product, and the firmware from other product cannot be used in N6

Firmware upgrade procedure

1. For safety reason, please make sure the player has sufficient battery power before
Please confirm the N6 player has not less then 50% battery power beforehand, otherwise please charge up the player before you proceed to firmware upgrade.
2. You can download the latest firmware from the Cayin website (Http://en.cayin.cn).
Decompress and copy the new N6 firmware file (n6.fw) into the root directory of a TF card (FAT32 formatted).
3. Switch off the player, insert the TF card into the player
4. Hold Up button and Power button at the same time until the player find the firmware file and go into firmware upgrade mode. A time elapse bar will display to show the progress of the upgrade process.
5. Player will reboot at the end of the firmware upgrade. You can verify the current firmware version number by selecting System Setting menu, under "About the Player" option, check out the "Firmware Version" detail.

★ Do not operate the machine during firmware upgrade
Please delete/remove the firmware file from the TF card after firmware upgrade
Please update your Music Library after firmware upgrade

Trouble Shooting

If you run into the following issues with your N6, please try to rectify the situation by the remedial action suggested. If the problem remains after you tried the suggested action, please contact our sales support or Maintenance department for alternative solution.

Symptom	Explanation	Remedial Action
Unable to turn on	The battery is too low to be powered on	Charge the battery and try to turn on again
No sound from headphones	Volume in too low	Adjust the volume to a suitable position
	The headphone is damaged or bad connections	Change the headphone
	Output level of the music file is too low	Play other music files
Unable to display filename	The player does not support the file format	Please cross check with the acceptable file format support by the player
TF card cannot be recognized	TF card is formatted in a file system that is not supported by the player	The player can only support FAT16, FAT32, NTFS or EXFAT file system
Music files cannot be played	Music file is damaged	Please remove damaged file from the player and play other music files
Filename has no suffix	Happened occasionally when parsing from an inappropriate Cue file	Edit cue file
File playback error	Music file in TF card might have been removed or deleted, causing the playback error	Update music library
System Halt		Reset the player by the button at the bottom of the player Refresh firmware if needed
USB DAC cannot be recognized	The driver has not been installed or setup properly PC music playback software has not designated N6 as playback output	Install appropriate USB Audio driver and select N6 as system output device at your music playback software on your computer

Safety Information

Product Safety

Do not place heavy objects on top of the player, this may cause damage or malfunction to the player
Do not place the player near anything that can disperse strong magnetic field
Do not use this player in highly moisturized environment, this may cause damage to electrical circuit.
Do not drop or hit the player and its accessories with hard force, this may cause damage or malfunction to the player
Do not use the machine in dusty or smoky environment, this may cause damage or malfunction to the player
Do not use chemical solvents or detergents to clean the player, this may cause damage to the player
Do not use the player at thunderstorm, this may cause damage to the player
Do not attempt to disassemble the player, this may cause damage and void the warranty

Battery

Do not place the unit in a fire or attempt to heat up the player, this may cause the battery to explode.
If you notice the battery of the player is displace high temperature, please stop using the player immediate, otherwise this may cause damage to the player

Technical Specifications

Audio Format Supported		
Format	Level of Support	Remarks
DSF	DSD64 and DSD128	
DFF	DSD64 and DSD128	
SACD–ISO	DSD64 and DSD128	
WAV	24Bit 192kHz	
FLAC	24Bit 192kHz	
APE	24Bit 192kHz	Support Fast and Normal lossless format
CUE	Support	With WAV,FLAC and APE track file
MP3	Support	
WMA	Support	
AAC	Support	

Specification		
Type	Item	Parameter/Value
PHONES OUT	Power Rating	20mW+220mW (@32Ω)
	Frequency Response	20Hz~20KHz±0.2dB
		5H~50KHz±1dB
	THD + N	0.005% (20Hz~20kHz,A-Weighted)
	Dynamic Range	110dB (20Hz~20kHz,A-Weighted)
	SNR	109dB (20Hz~20kHz,A-Weighted)
	Output Impedance	< 0.26Ω
LINE OUT	Output level	1.7V (@10kΩ)
	Frequency response	20~20kHz±0. 2dB
		5Hz~50kHz±1dB
	THD + Noise	0.004% (20Hz~20kHz,A-Weighted)
	Dynamic Range	110dB (20Hz~20kHz,A-Weighted)
	SNR	109dB (20Hz~20kHz,A-Weighted)
COAX OUT	Output level	0.5V (@ 75Ω)
		1.0V (Unloaded)
	Output Impedance	75Ω
Other specifications	Display	2.4" 400*360 IPS
	Data transmission	USB2. 0
	Outputs	Phone out(3.5mm)
		Line out(3.5mm)
		Coaxial Digital Out(3.5mm)
	Player dimension	126*72*19. 7 (mm)
	Package size	208*163*47 (mm)
	Net Weight	~ 225g
	Package weight (Player and Accessories)	~ 635g
	Battery	5600mAh 3.7V Lithium polymer
	Memory card	MicroSD-TF (Up to 128G, not provided)
	Firmware upgrade	Upgrade via TF card
	Battery duration	~ 7hrs
	Charging time	~ 4hrs (with 2A charger, not privided)

Zhuhai Spark Electronic Equipment Co., LTD

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